REMARKS

Claims 1-15 are pending.

Response to Claim Rejections Under § 103

A. Claims 1-10, 12, and 14-15 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over WO 03/032305 to Kitano et al.;

B. Claim 11 has been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kitano in view of U.S. Patent No. 6,586,496 to Takamatsu et al.; and

C. Claims 11 and 13 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kitano in view of U.S. Patent Application Publication No. 2003/0129385 to Hojo et al.

Applicants respectfully traverse.

The present claims are directed to a photo-curable transfer sheet having a photo-curable transfer layer comprising a photo-curable composition, the photo-curable composition being deformable by application of pressure and containing a reactive polymer having a photopolymerizable functional group,

wherein the photo-curable transfer layer shows linearity in relationship between strain [γ] (%) and time [t] (second) determined by a creep test using a dynamic viscoelasticity measuring apparatus under the conditions of an ordinary temperature, stress of 50Pa and a time period of 120 seconds, and satisfies a following formula:

$$\log \gamma = a + b \cdot \log t$$

in which "a" is a real number, and "b" is in the range of 0.10 to 0.53. See, Claim 1.

The Examiner asserts at page 3 of Office Action that "[c]omposition 5 taught by [A]pplicant is identical to that taught in Kitano except for the addition of a tackifier. Kitano discloses [the] addition of the same tackifiers as [A]pplicant in an amount sufficient to improve the processing properties of the adhesive...", and "Applicant cites examples of tackifiers at [paragraph] [0186]. Addition of additives including rosins, terpene resins etc (identical to the tackifiers taught by applicant at [paragraph] [0186]) are taught in the Kitano reference at [paragraph] [0108]."

Applicants disagree with the Examiner's determination that the claimed invention is obvious.

A photo-curable transfer sheet having a photo-curable transfer layer satisfying the following formula: $\log \gamma = a + b \cdot \log t$ in which "a" is a real number, and "b" is in the range of 0.10 to 0.53 according to the present claimed invention, can be prepared in various processes. As disclosed in the present specification, "[t]he photo-curable transfer sheets (1) is advantageously obtained by appropriately utilizing the composition constituting the photo-curable transfer layer of one of the photo-curable transfer sheets (2) to (8), especially (2) to (5)." See, page 36 lines 19-23.

Applicants direct the Examiner's attention to Examples 1-6 (Tables 1-3). Examples 1-4 use a photo-curable composition (2) containing a compound having at least two groups reactive to the functional group having active hydrogen; Example 5 (Table 2) uses a photo-curable composition (3) containing a tackifier having a solubility parameter (SP value) of not less than 8.50; and Example 6 uses a photo-curable composition (4) containing a transparent fine particle having a mean particle size of not more than 300 nm. Each of Examples 1-6 satisfy the formula: $\log \gamma = a + b \cdot \log t$, i.e., only photo-curable compositions that are deformable by application of

pressure and contain a reactive polymer having a photopolymerizable functional group, and the above-mentioned specific material in the specific amount, satisfy the following formula: $\log \gamma = a + b \cdot \log t$.

In this regard, the solubility parameter (SP value) generally means a measure representing intermolecular force. For example, the SP value of butyl rubber is 7.3, that of polyethylene is 7.9, that of natural rubber is 7.9-8.3, and that of styrene-butadiene rubber is 8.1-8.5. Therefore, an SP value of not less than 8.50 is considered to be relatively large as a tackifier (e.g., a hydrocarbon).

Kitano discloses at paragraphs [0108] and [0109] that as other additives, a hydrocarbon resin can be used for improving processing properties such as laminating properties. Kitano further discloses that, as the hydrocarbon, numerous resins may be used, e.g., rosins including gum resins, tall oil resins, wood resins; rosin derivatives including hydrogenated rosins, disproportionated rosins, polymerized rosins, esterificated rosins, metal salts of rosins; terpene resins including α-pinene resins, β-pinene resins, and terpene phenol resins; natural resins including dammar, copal, shellac; synthetic resins including petroleum resins (e.g., aliphatic petroleum resins, aromatic petroleum resins, cycloaliphatic petroleum resins, copolymer type petroleum resins, hydrogenated petroleum resins, pure monomer type petroleum resins, and coumarone-indene resins), phenol resins (e.g., alkylphenol resins and modified phenol resins), xylene resins (e.g., xylene resins, modified xylene resins); and acrylic resins. Thus, it is difficult to appreciate that additives suitable for the object of the present invention are selected from the above-mentioned resins.

According to Kitano, the purpose of using the additives is for improving processing properties such as laminating properties, whereas the object of the present invention is to provide

a transfer sheet that does not bleed the components of the transfer layer on its side and does not generate variation in the thickness of the transfer sheet (transfer layer).

Kitano is completely silent with respect to issues relating to bleeding of the components of the transfer layer on its side and variation of the thickness. Thus, it would have been difficult for one skilled in the art to select the specific tackifier of the present invention from the numerous resins disclosed in Kitano. That is, one skilled in the art would need to undertake undue experimentation, i.e., blind trial and error. Moreover, it is not apparent whether the use of the Composition 5 containing no tackifier *per se* is appropriate or not, and whether the use of the additives *per se* is appropriate or not, because Kitano is completely silent with respect issues relating to bleeding of the components of the transfer layer on its side and variation of the thickness.

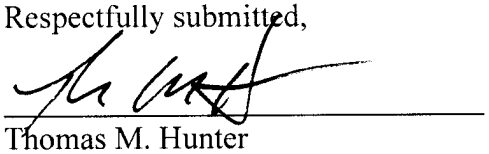
Moreover, Applicants wish to emphasize that the present invention provides unexpectedly superior results, as can be seen from a comparison of Example 5 in the specification with Comparative Example 2 (which corresponds to Example 3 of Kitano), e.g., with respect to bleeding and thickness accuracy, as discussed on page 3 of the response filed February 14, 2011. Applicants submit that this is an additional reason why the claimed invention is not obvious.

Takamatsu and Hojo fail to make up for the deficiencies of Kitano.

Thus, Kitano, Takamatsu and Hojo fail to render obvious the present claims. Accordingly, withdrawal of the rejections is respectfully requested.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Thomas M. Hunter
Registration No. 64,676

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

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